

September 29, 2017

The Honorable Ajit Pai  
Chairman  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Dear Chairman Pai,

We are writing to express our concern for the growing challenge presented by low-Earth orbit (LEO) space debris. As the Commission considers multiple requests for new LEO satellite constellations, we ask that you formally coordinate with the National Aeronautics and Space Administration (NASA) and the Federal Aviation Administration (FAA) to establish an interagency working group on space debris and to develop a comprehensive domestic policy on space debris mitigation.

We note that NASA, as stated in its own filings with the Commission, is conducting an internal parametric study on large constellations, which will be completed later this year. As part of your coordination with NASA on this issue, we ask that the Commission use any recommendations or best practices from this study to inform regulatory decisions on LEO constellation permitting.

As you may know, the U.S. Department of Defense Space Surveillance Network currently tracks nearly 22,000 pieces of orbital debris, defined as man-made objects in Earth's orbit that no longer serve a useful purpose. This figure does not include hundreds of thousands of pieces of debris smaller than 10cm that are also orbiting the Earth. Collisions with debris as small as 10cm can catastrophically damage satellites, and debris as small as 1cm can disable spacecraft. Each collision exponentially increases the likelihood of another collision, creating a potential cascade that could severely inhibit future telecommunications, national security, and other space-based activity in the LEO environment.

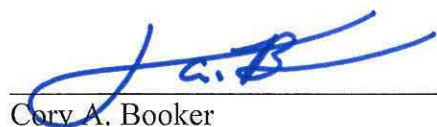
In the last decade, two major satellite collisions dramatically increased the amount of fragmented debris currently in orbit. Model predictions suggest that even with nearly full compliance with existing mitigation measures, LEO space debris is expected to grow by an average of 30% in the next 200 years. A number of national and international studies have concluded that orbital debris may have already reached a tipping point.

Collectively, if approved, the applications pending at the Commission for new satellite constellations could drastically increase the number of satellites in LEO. In light of these pending requests, we remind you of the United States' obligation to ensure that any licensed system will not operate near other systems in a way that could potentially create space new debris, endanger national and international assets, and threaten our future access to space.

We are extremely excited by the unique potential for these proposed satellite constellations to connect rural and underserved American populations to the internet. However, swift action to mitigate the collision risk associated with a growing number of constellations is critical to ensuring the long-term sustainability of our space environment.

We stand ready and willing to support the Commission, NASA and FAA in establishing comprehensive regulatory policy to mitigate the space debris challenge. We appreciate your prompt attention to this issue and we look forward to discussing further.

Sincerely,



Cory A. Booker  
United States Senator



Dan Sullivan  
United States Senator

cc: The Honorable Robert M. Lightfoot, Jr.  
Acting Administrator, National Aeronautics and Space Administration

The Honorable Michael P. Huerta  
Administrator, Federal Aviation Administration



FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON

OFFICE OF  
THE CHAIRMAN

November 21, 2017

The Honorable Cory Booker  
United States Senate  
359 Dirksen Senate Office Building  
Washington, D.C. 20510

Dear Senator Booker:

Thank you for your letter regarding the challenges presented by space debris in low-Earth orbit (LEO), particularly with respect to potential debris resulting from new LEO satellite constellations. As you indicate, a number of these new constellations hold out the promise of connecting rural and underserved populations to the internet. Others are providing, or plan to provide, new sources of data about the Earth and its weather.

Since 2004, the FCC has worked with other federal agencies and in particular the National Aeronautics and Space Administration (NASA) to mitigate orbital debris. This engagement includes supporting other U.S. agencies as they work domestically and internationally to improve debris mitigation practices and draws heavily on technical guidance and assessment tools developed by NASA.

As we enter a new era in which hundreds or thousands of new satellites are deployed, Commission staff are also in the early stages of undertaking a review of our current rules to explore whether rule changes are needed, including changes that may be necessary in light of increasing rates of small satellite deployment and proposed large constellation deployments. The FCC will also continue to work with our federal partners to improve debris mitigation practices, and we will explore establishing an interagency working group on debris mitigation.

I appreciate your interest in this matter. Please let me know if I can be of any further assistance.

Sincerely,

A handwritten signature in blue ink, which appears to read "Ajit V. Pai", is written over the typed name.

Ajit V. Pai





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WASHINGTON

OFFICE OF  
THE CHAIRMAN

November 21, 2017

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United States Senate  
702 Hart Senate Office Building  
Washington, D.C. 20510

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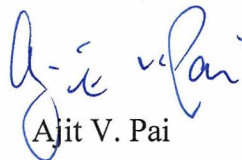
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Sincerely,

  
Ajit V. Pai

*Senator, thanks again for flagging this issue. Look forward to working with you on this, rural health care, and many other issues!*